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## FERRUGINOUS HAWK USING ROCK IN NEST DEFENSE

by

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While studying Ferruginous Hawks (*Buteo regalis*) in Harding County, South Dakota during 1977 I observed a resident female Ferruginous Hawk use a rock in nest defense. The incident occurred on 17 June, during one of my twice-weekly, post hatching nest visits.

As I approached the nest, the female flew overhead and circled, calling repeatedly. She showed no other aggressive behavior at this time. Her mate, responding to the calls, flew to the area of the nest and on 4 occasions swooped to within 3 m of me from a height of approximately 20 m. He then joined the female, circling and calling overhead. This pattern of nest defense, involving an aggressive male and more passive female, was typical of Ferruginous Hawks during the study. After 3 minutes of circling the female flew off in a southwesterly direction and disappeared over a nearby hill. She returned approximately 2 minutes later, circled overhead a few times and swooped toward me, approaching to within 10 m. Upon turning up from her dive she released a 5x7x10 cm stone which she carried in her talons. The stone landed within 5 m of me. The female then rejoined her mate overhead, both birds circling and calling until I left the area of the nest.

This behavior was not repeated during any of my 5 subsequent visits to this particular nest, nor was it exhibited by any of the other 34 breeding pairs of Ferruginous Hawks studied over a 2 year period. Janes (Condor 78:409, 1976) reported on a pair Common Ravens (*Corvus corax*) apparently using rocks during nest defense. To my knowledge, no other example of a raptor using rocks in defense of its nest has been reported.

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